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LaPointe

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[54] **AIRCRAFT DETECTION SYSTEM**

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[52] **U.S. Cl.** **367/118**; 367/136; 367/906

[58] **Field of Search** 367/118, 129, 367/136, 135, 120, 906, 124, 125, 126, 127

[56] **References Cited**

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[57] **ABSTRACT**

A covert aircraft detection system for a submarine is described which includes an acoustic antenna array and a signal processor to process the acoustic signals to provide the location of the detected aircraft and to classify the detected aircraft. The acoustic antenna array is mounted on the submarine mast and includes a vertically extending rod having a microphone and connected thereto three or more folding legs having microphones connected thereto. The microphones detect the aircraft acoustic signals and these signals are transferred to the signal processor which provides the location of the aircraft and matches the acoustic signal with the database of aircraft acoustic signals to classify the type of aircraft. When the acoustic antenna array is connected to a rotatable mast, such as a periscope, a rotary encoder and mast bearing indicator are utilized to account for the rotation of the acoustic antenna array and the rotation of the mast, respectively.

7 Claims, 1 Drawing Sheet